

JEB AND MARGARET'S TRAILER HAVEN (PWSNO 1090060) SOURCE WATER ASSESSMENT REPORT

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State of Idaho Department of Environmental Quality

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SOURCE WATER ASSESSMENT FOR JEB AND MARGARET'S TRAILER HAVEN

Under the Federal Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. The Department of Environmental Quality is completing the assessments for all Idaho public drinking water systems. The assessment for your drinking water source is based on well construction characteristics; site specific sensitivity factors associated with the aquifer the water is drawn from; a land use inventory inside the well recharge zone; and water quality history. For non-community transient water systems like Jeb and Margaret's Trailer Haven, recharge zones were generally delineated as a 1000-foot fixed radius around the wells.

This report, *Source Water Assessment for Jeb and Margaret's Trailer Haven* describes factors used to assess the well's susceptibility to contamination. The analysis relies on information from the well log; an inventory of land use, well site characteristics, potential contaminant sites identified through a Geographic Information System database search; and information from the public water system file. The ground water susceptibility analysis worksheet for Jeb and Margaret's Trailer Haven is attached.

Taken into account with local knowledge and concerns, this assessment should be used as a planning tool to develop and implement appropriate protection measures for this system. **The results should not be used as an absolute measure of risk and are not intended to undermine the confidence in your water system.**

Well Construction. The Jeb and Margaret's Trailer Haven water system serves a 260 unit park located on the shore of Lake Pend Oreille about 3 miles northwest of Hope, Idaho. The well currently in use was drilled in January 1969 to a depth of 31 feet. The 8-inch steel casing, extending the full depth of the well is perforated from 20 to 31 feet below the surface. The 18-foot deep surface seal passes through 12 feet of clay and gravel lying over a water-producing layer of sand and pea gravel. The capacity of the well is 20 gpm.

Jeb and Margaret's was mostly in compliance with *Idaho Rules for Public Drinking Water Systems* when it was inspected in June 1997. The survey noted that the top of the casing is flush with the ground, and needs to be extended to at least 12-inches above grade to protect the well from surface contaminants. The well should also be vented.

Well Site Characteristics. Soils in the well recharge zone for Jeb and Margaret's are generally well drained. Well logs in the vicinity show gravel and sand beds with a thin covering of gravel mixed with clay. Well-drained soils and a shallow water table provide little protection against migration of contaminants toward the well.

Potential Contaminant Inventory. Situated at the mouth of Trestle Creek, the protection zone delineated for Jeb and Margaret's Trailer Haven gets heavy recreational use. State Highway 200 and a rail line cross the delineation boundary.

Major transportation corridors like this are potential sources of every class of regulated contaminant. The well is in a flood plain, and needs to be evaluated to determine whether it is influenced by surface water from the lake or Trestle Creek. The Public Water System file for Jeb and Margaret's Trailer Haven notes the presence of three wells on the property in addition to the well supplying drinking water for the park. All are located near a storage building south of the main well. The well with an 8-inch casing is used for irrigation and fire protection. Two adjacent 6-inch wells are not in use. Because they can be a direct conduit into the ground water for surface contaminants, the unused wells should be sealed. The location of septic system components for the park is not documented in the Public Water System File.

Water Quality History. Jeb and Margaret's Trailer Haven has had few water quality problems. In the period from January 1998 through the present, only one quarterly sample was positive for total coliform bacteria. Cross connection with a private well was the probable source of contamination. Total coliform were absent in subsequent samples. Annual tests for nitrates show concentrations ranging between 0.024 and 0.142 mg/l. The Maximum contaminant Level (MCL) for nitrate is 10 mg/l.

Susceptibility to Contamination. An analysis of the Jeb and Margaret's Trailer Haven well, incorporating information from the public water system file and the potential contaminant inventory, ranked the well moderately susceptible to all classes of regulated contaminants. Most of the points marked against the well are due to natural risk factors related to local geology. The complete analysis worksheet for your well is on page 6 this report. Formulas used to compute the final susceptibility scores are at the bottom of the worksheet.

Source Water Protection. This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

Jeb and Margaret's Trailer Haven well has a good water quality history. Continuing to maintain and operate the system in compliance with *Idaho Rules for Public Drinking Water Systems* is the best drinking water protection for the resort.

A voluntary measure every system should employ is development of an emergency response plan. There is a simple, fill-in-the-blanks form available on the DEQ website (www.deq.state.id.us/water/water1.htm) to guide systems through the emergency planning process.

The resort should also investigate ground water protection programs like Home*A*Syst. Home*A*Syst is designed to help well owners assess everyday activities for their potential impact on drinking water quality.

Topics include septic tank management, petroleum product storage, handling and storing lawn and household chemicals and similar activities. Because Jeb and Margaret's may not have direct jurisdiction over the entire recharge zone for its well, it will be important to form partnerships with neighboring landowners, and public agencies to regulate land uses that can degrade ground water quality. The goal of source water protection is to maintain current water quality for the future despite the changes we can expect with population growth in North Idaho.

Assistance. Public water suppliers and users may call the following IDEQ offices with questions about this assessment and to request help with drinking water protection planning.

Coeur d'Alene Regional DEQ Office (208) 769-1422

State IDEQ Office (208) 373-0502

Website: <http://www.deq.state.id.us>

Figure 1. Jeb & Margarets Trailer Haven Delineation and Potential Contaminant Inventory.



PWS # 1090060
Jeb and Margarets
Trailer Haven
Well

Ground Water Susceptibility

Public Water System Name : **JEB AND MARGARET'S TRAILER HAVEN**
 Public Water System Number : **1090060**

Well # : **WELL #1**
 8/20/02 10:18:18 AM

1. System Construction		SCORE			
Drill Date	12/3/69				
Driller Log Available	YES				
Sanitary Survey (if yes, indicate date of last survey)	YES 1997				
Well meets IDWR construction standards	YES	0			
Wellhead and surface seal maintained	YES	0			
Casing and annular seal extend to low permeability unit	NO	2			
Highest production 100 feet below static water level	NO	1			
Well located outside the 100 year flood plain	NO	1			
Total System Construction Score		4			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	NO	2			
Vadose zone composed of gravel, fractured rock or unknown	YES	1			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	NO	2			
Total Hydrologic Score		6			
3. Potential Contaminant / Land Use - ZONE 1A		IOC	VOC	SOC	Microbial
		Score	Score	Score	Score
Land Use Zone 1A	Trailer Park/Recreation	2	2	2	2
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		2	2	2	2
Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	YES	1	1	1	2
(Score = # Sources X 2) 8 Points Maximum		2	2	2	4
Sources of Class II or III leacheable contaminants or Microbials	YES	1	1	1	
4 Points Maximum		1	1	1	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		3	3	3	4
Cumulative Potential Contaminant / Land Use Score		5	5	5	6
4. Final Susceptibility Source Score		11	11	11	12
5. Final Well Ranking		Moderate	Moderate	Moderate	Moderate

The final scores for the susceptibility analysis were determined using the following formulas:

- 1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.27)
- 2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.35)

Final Susceptibility Ranking:

0 - 5 Low Susceptibility
 6 - 12 Moderate Susceptibility
 > 13 High Susceptibility

POTENTIAL CONTAMINANT INVENTORY LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as Superfund is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.